



Research Paper

Understanding the gender gap in Iran's industrial workforce: Barriers to women's participation

Mohammad Taleghani¹, Mohammadreza Jabreilzadeh Sola¹, Motahereh Siradaghi Kisari²

¹ Department of Industrial Management, Rasht Branch, Islamic Azad University, Rasht, Iran

² Department of Arts Research, University of Applied Sciences, Behshahr, Golestan, Management, Rasht Branch, Islamic Azad University, Rasht, Iran

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ABSTRACT

This review investigates the persistent gender gap in Iran's industrial workforce, analyzing how socio-cultural norms, legal frameworks, and economic policies collectively restrict women's participation. Drawing on Iranian and international scholarship from the past decade, the study highlights three interconnected dimensions. First, patriarchal values and discriminatory laws—such as spousal consent requirements and occupational stereotypes—systematically exclude women from male-dominated industrial sectors like manufacturing and energy, despite their growing presence in STEM education (Zahedi et al., 2022). Second, economic policies, including privatization, sanctions, and subsidy programs, exacerbate gender disparities by prioritizing cost-cutting measures that displace women into informal, low-wage labor (Salehi-Isfahani, 2020) and reinforcing male-dominated industries (Moghadam, 2019). Third, these barriers undermine Iran's economic development by stifling innovation and GDP growth (World Bank, 2020) while deepening social inequalities through income disparities and limited women's agency (Rostami-Povey, 2021). The review underscores the urgency of legal reforms, inclusive economic strategies, and investments in women's technical training to address systemic inequities. By aligning policies with global commitments like the UN SDGs (UNDP, 2021), Iran can harness women's potential to drive sustainable development and social progress.

1 | INTRODUCTION

The underrepresentation of women in Iran's industrial workforce is a persistent and multifaceted issue that reflects broader socio-economic inequities entrenched within the country's cultural, legal, and economic frameworks. Despite significant strides in women's education and political participation over the past four decades, their engagement in industrial sectors—such as manufacturing, energy, construction, and technology—remains disproportionately low. According to World Bank data (2023), women constitute approximately 18% of Iran's total labor force, with only 12% participating in industrial sectors, compared to a global average of 39% (ILO, 2022). This stark disparity underscores a systemic failure to leverage half of the population's potential, raising critical questions about the socio-cultural, legal, and economic barriers that perpetuate gender-based exclusion. The persistence of this gap is particularly perplexing given Iran's demographic and educational shifts. Since the 1980s, female enrollment in higher education has surged, with women now comprising over 60% of university graduates (UNESCO, 2021). Yet, their transition into industrial careers is hindered by intersecting factors including patriarchal norms, discriminatory legislation and economic policies that prioritize male-dominated industries. These barriers not only limit individual opportunities but also undermine national economic growth. The International Monetary Fund (IMF, 2020) estimates that closing the gender gap in labor force participation could boost Iran's GDP by 34%, a figure that underscores the economic urgency of addressing this issue.

Iran's socio-cultural context is shaped by deeply entrenched patriarchal norms that prioritize women's roles as wives and mothers over their participation in public life. These norms are reinforced by religious interpretations, familial expectations, and societal perceptions of "appropriate" work for women. For instance, industries such as manufacturing and construction are often perceived as "male domains" requiring physical strength or technical expertise, roles deemed incompatible with traditional gender roles (Mir-Hosseini, 2020). Such stereotypes are perpetuated by media, educational curricula, and workplace cultures that associate industrial labor with masculinity. These attitudes are further institutionalized through *mahram* laws, which restrict women's mobility and require male guardianship for certain activities, including travel or employment in certain sectors (Human Rights Watch, 2021). Even when women overcome societal pressures to enter industrial fields, they face workplace harassment, limited networking opportunities, and a lack of female role models. For example, a 2022 study by the Iran Chamber of Commerce found that 68% of female engineers reported experiencing

gender-based discrimination, with many citing familial disapprovals as a primary barrier to career advancement (ICC, 2022). Iran's legal framework institutionalizes gender-based discrimination through laws that restrict women's autonomy in the workplace. The Islamic Penal Code and Civil Code, for instance, grant husbands the authority to prohibit their wives from working if they deem it "incompatible with family interests" (Article 1117 of the Civil Code). Additionally, labor laws exclude women from working night shifts, hazardous jobs, and certain industrial sectors, ostensibly for their "protection" but effectively limiting their access to higher-paying roles (Kazempur, 2019). These restrictions are compounded by the absence of anti-discrimination laws and enforcement mechanisms. While Iran ratified the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) in 1995, it entered extensive reservations that rendered the treaty ineffective (UN Women, 2020). Consequently, employers face no legal repercussions for gender-based wage gaps, which average 35% in industrial sectors (Statistical Center of Iran, 2021).

Economic policies in Iran have further marginalized women in the industrial workforce. Decades of sanctions, inflation, and privatization have eroded job security, pushing many women into the informal sector, where they lack labor protections and social benefits. Approximately 80% of employed women in Iran work in informal roles, such as home-based manufacturing or agriculture, which offer unstable incomes and limited upward mobility (ILO, 2021). Even in formal industrial sectors, women are concentrated in low-skilled, low-wage positions. For example, in the automotive industry—a cornerstone of Iran's manufacturing sector—women account for less than 5% of engineers and technical staff (Iran Automotive Industry Association, 2022). This segregation is exacerbated by a lack of access to capital and entrepreneurship opportunities. Women receive only 5% of business loans from state-owned banks, hindering their ability to establish industrial enterprises (World Bank, 2021). The exclusion of women from industrial sectors carries significant economic and social costs. At the macro level, it stifles innovation and productivity, as diverse workforces are linked to higher rates of technological adoption and problem-solving (World Economic Forum, 2020). Iran's industrial sectors, particularly in STEM fields, face labor shortages that could be mitigated by gender-inclusive hiring practices. Socially, the gender gap reinforces cycles of poverty and inequality. Women in industrial roles often serve as primary caregivers, and their economic marginalization limits household resilience to economic shocks. Moreover, the underrepresentation of women in leadership roles perpetuates a culture of exclusion, discouraging younger generations from pursuing non-traditional careers (UNDP, 2022).

This article seeks to address the following questions:

- How do socio-cultural norms and legal frameworks in Iran restrict women's access to industrial sectors?
- What economic policies exacerbate gender-based disparities in industrial employment?
- What are the implications of these barriers for Iran's economic development and social equity?

To answer these questions, the analysis draws on quantitative data from the Statistical Center of Iran, the World Bank, and the ILO, as well as qualitative studies from Iranian NGOs, academic journals, and international organizations. By synthesizing these sources, this article provides a comprehensive assessment of the systemic barriers to women's participation and offers evidence-based recommendations for reform.

Table 1: Women's Participation in Iran's Industrial Workforce 1973–2023 (Authors, 2025)

Time period	Female labor participation rate (overall)	Female participation industrial sectors (based on %)
1973–1979 (Pre-Revolution)	12–15%	8–10%
1980–1989 (Post-Revolution & War)	9–12%	3–5%
1990–1999 (Economic Liberalization)	10–13%	4–6%
2000–2009 (Neo-liberal Reforms)	14–16%	5–7%
2010–2019 (Sanctions & Crisis)	16–18%	7–9%
2020–2023 (Current Trends)	18–20%	10–12%

2 | LITERATURE REVIEW

The underrepresentation of women in Iran's industrial sectors has garnered increasing attention from scholars, policymakers, and international organizations over the past two decades. This literature review synthesizes key academic and institutional contributions to the discourse, highlighting socio-cultural, legal, economic, and educational factors that perpetuate gender disparities. The review also identifies gaps in existing research and underscores the need for intersectional analyses to inform policy reforms.

2.1 | 1. Socio-Cultural Barriers: Patriarchy and Gender Norms

Iran's socio-cultural landscape, shaped by Shia Islamic interpretations and patriarchal traditions, has long confined women to domestic roles, framing industrial work as incompatible with femininity. Anthropological studies emphasize how modesty norms (e.g., mandatory hijab, gender segregation) and familial expectations limit women's access to male-dominated industries (Mir-Hosseini, 2020). For instance, industries like construction or heavy manufacturing are perceived as requiring physical endurance or technical expertise, traits stereotypically associated with masculinity (Shahidian, 2018). Media and educational systems reinforce these stereotypes. Textbooks and state propaganda often depict women as caregivers, while men are portrayed as breadwinners and industrial laborers (UNDP, 2022). Sociological surveys further reveal that familial resistance remains a critical barrier: 62% of female engineering graduates reported familial pressure to prioritize marriage over careers (Iran Chamber of Commerce, 2022).

2.2 | Legal Frameworks: Institutionalized Discrimination

Iran's legal system codifies gender-based discrimination, directly restricting women's industrial participation. Key laws include:

Islamic Penal Code (1983): Grants husbands' authority to block wives from working if deemed "against family interests" (Article 1117).

Labor Law: Prohibits women from night shifts and hazardous industrial roles, ostensibly for "protection" but effectively excluding them from high-paying positions (Kazemipur, 2019).

Lack of Anti-Discrimination Laws: Iran's reservations to the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) render it ineffective, leaving wage gaps and workplace harassment unaddressed (UN Women, 2020). Legal scholars argue that these frameworks institutionalize women's economic dependency, reinforcing their marginalization in sectors requiring autonomy or leadership roles (Esfandiari, 2021).

2.3 | Economic Policies and Structural Exclusion

Economic factors, including sanctions, privatization, and labor market dynamics, disproportionately impact women.

Sanctions and Stagflation: Decades of U.S. sanctions and mismanagement have eroded formal job opportunities, pushing women into informal sectors (e.g., home-based workshops) with no legal protections (World Bank, 2021).

Privatization: Post-1990s privatization of state-owned industries reduced female employment, as private firms prioritize cost-cutting over gender equity (ILO, 2021).

Wage Gaps: Women earn 35% less than men in industrial sectors, driven by occupational segregation and employer biases (Statistical Center of Iran, 2021).

Economists note that these policies exacerbate poverty, particularly for rural women, who face limited access to vocational training or capital (Hoodfar, 2019).

2.4 | Education: Progress and Paradoxes

Despite significant gains in female education—women now comprise 60% of university graduates—structural barriers prevent translation into industrial careers.

STEM Enrollment: While women constitute 45% of STEM graduates, they are concentrated in life sciences rather than engineering or computer science, fields critical to industrial innovation (UNESCO, 2021).

Workforce Mismatch: Over 70% of female graduates work in education or healthcare, sectors with lower wages and status compared to industry (ICC, 2022).

Cultural Stigma: Societal perceptions of industrial work as "unfeminine" deter women from pursuing technical careers, even when qualified (Kazemipur, 2019).

This "education-employment gap" highlights systemic failures in aligning educational outcomes with labor market needs (World Bank, 2023).

2.5 | Emerging Trends and Resistance

Recent activism and policy debates signal gradual shifts:

Social Media and Advocacy: Campaigns like #WhereIsMyName and #WomanLifeFreedom challenge patriarchal norms, amplifying demands for workplace equality (Human Rights Watch, 2021).

Policy Proposals: Reformists advocate for quotas in STEM industries, subsidized childcare, and amendments to discriminatory laws (Esfandiari, 2021).

Private Sector Initiatives: A handful of tech startups and automotive companies have launched gender-inclusive hiring programs, though scalability remains uncertain (Iran Automotive Industry Association, 2022). However, these efforts face backlash from conservative institutions, underscoring the fragility of progress (Shahidian, 2018).

2.6 | Gaps in the Literature

While existing research provides critical insights, several gaps persist:

Intersectionality: Few studies examine how class, ethnicity, or geography intersect with gender to shape industrial exclusion (e.g., rural vs. urban women).

Informal Sector Dynamics: Limited data exists on women's roles in informal industrial work, such as home-based manufacturing.

Policy Impact Assessments: There is a lack of longitudinal studies evaluating the effectiveness of recent reforms or grassroots initiatives.

2.7 | Understanding the Gender Gap in Iran's Industrial Labor Force

The gender gap in Iran's industrial labor force is a multifaceted issue rooted in socio-cultural norms, legal frameworks, and economic policies. This review synthesizes findings from Iranian and non-Iranian researchers over the past decade to answer three key questions: (1) How do socio-cultural norms and legal frameworks limit women's access to industrial sectors? (2) Which economic policies exacerbate gender inequalities in industrial employment? (3) What are the implications of these barriers for Iran's economic development and social equality? By examining these dimensions, this article aims to shed light on the systemic challenges and their broader implications. Legal frameworks further institutionalize these limitations. The Iranian constitution emphasizes the importance of family stability but often prioritizes men as primary breadwinners, indirectly marginalizing women in competitive job markets (Hoodfar, 2017). Additionally, discriminatory laws, such as those requiring spousal consent for women seeking certain jobs or traveling abroad, hinder professional mobility (Tohidi, 2019). These legal barriers are compounded by workplace practices that favor men, including

unequal pay scales and limited maternity leave provisions (Esfandiari, 2021). Research also highlights how educational opportunities fail to translate into equitable industrial employment. While women constitute a growing proportion of university graduates in STEM fields, they face structural obstacles when transitioning into technical roles within the industrial sector (Zahedi et al., 2022). Cultural biases against hiring women for physically demanding or high-risk positions perpetuate occupational segregation, leaving them underrepresented in lucrative industries like oil, gas, and mining.

Economic policies in Iran have inadvertently widened gender disparities in industrial employment. One critical factor is the emphasis on privatization and deregulation, which disproportionately affects women workers. Privatized enterprises tend to prioritize cost-cutting measures, often leading to layoffs among lower-wage employees—who are predominantly women (Salehi-Isfahani, 2020). Furthermore, informal labor markets thrive under such conditions, pushing women into precarious, low-paying jobs with little job security or benefits (Rahbari, 2021). Sanctions imposed on Iran have exacerbated these issues by creating an unstable economy reliant on resource-intensive industries dominated by men. According to Moghadam (2019), sanctions have stifled diversification efforts, concentrating growth in sectors where women face entrenched barriers. For example, the energy sector remains heavily male-dominated, with minimal investment in initiatives aimed at integrating women into its workforce. Government subsidies and welfare programs, while intended to support vulnerable populations, sometimes reinforce traditional gender roles. Subsidies targeting households often assume male earners as primary recipients, sidelining women's economic agency (Kazemipur, 2022). Similarly, entrepreneurship incentives rarely cater to women entrepreneurs, who encounter difficulties accessing capital and navigating bureaucratic hurdles (Golkar, 2021).

The barriers to women's participation in Iran's industrial labor force carry profound implications for both economic development and social equality. Economically, excluding half the population from productive sectors undermines national productivity and innovation potential. Studies indicate that increasing women's labor force participation could boost GDP significantly, particularly in emerging economies like Iran (World Bank, 2020). However, persistent gender gaps hinder this potential, limiting human capital utilization and impeding sustainable growth. Socially, restricted access to industrial employment perpetuates inequality and reinforces existing power dynamics. Women excluded from formal industrial roles often resort to informal work, exposing them to exploitation and poverty (Rostami-Povey, 2021). This cycle not only entrenches gender disparities but also widens income inequality across society. Moreover, the absence of women in leadership positions within industrial firms diminishes diversity in decision-making processes, stifling inclusive policy formulation (Shirazi, 2022). From a developmental perspective, addressing these barriers aligns with global commitments to achieving gender equality, as outlined in the United Nations Sustainable Development Goals (SDGs). Specifically, SDG 5 calls for eliminating all forms of discrimination against women and ensuring equal opportunities in economic participation (UNDP, 2021). Failure to address these systemic issues risks isolating Iran from international partnerships and advancements in gender-responsive policymaking.

Table 2. Key Barriers to Women's Participation in Iran's Industrial Workforce (Authors, 2025)

KEY FACTORS	EXAMPLES/FINDINGS(CITATIONS)	IMPLICATIONS
Patriarchal values	Families discourage women from male-dominated industries (e.g., manufacturing) due to cultural stereotypes (Khosravi, 2018).	Reinforces occupational segregation and restricts professional mobility.
Discriminatory laws	Spousal consent requirements for certain jobs and travel abroad (Tohidi, 2019).	Institutionalizes gender inequality and limits workforce entry.
Education-to-workforce gaps	Women STEM graduates face barriers entering technical roles in oil/gas sectors (Zahedi et al., 2022).	Wastes human capital and perpetuates gendered labor divisions.
Privatization/deregulation	Privatized firms prioritize cost-cutting, leading to female layoffs (Salehi-Isfahani, 2020).	Increases women's reliance on informal, low-wage work.
Sanctions and resource dependency	Sanctions concentrate growth in male-dominated sectors (e.g., energy) (Moghadam, 2019).	Limits women's access to high-paying industrial roles.
Subsidy and welfare policies	Household subsidies prioritize male earners, sidelining women's economic agency (Kazemipur, 2022).	Reinforces traditional gender roles and income inequality.
Economic stagnation	Gender gaps reduce GDP potential; women's exclusion limits innovation (World Bank, 2020).	Hinders sustainable growth and global competitiveness.

Social inequality	Women in informal work face exploitation and poverty (Rostami-Povey, 2021).	Deepens income disparities and marginalizes women.
Missed SDG targets	Failure to meet UN SDG 5 (gender equality) risks isolating Iran from global partnerships (UNDP, 2021).	Undermines international credibility and development aid.

3 | CONCLUSION

The gender gap in Iran's industrial labor force is a systemic issue shaped by intersecting socio-cultural, legal, and economic barriers. This review underscores how patriarchal norms, discriminatory laws, and exclusionary economic policies collectively restrict women's participation in industrial sectors, with far-reaching consequences for both economic progress and social equity. Traditional gender roles and legal frameworks institutionalize inequality, confining women to domestic spheres and limiting their access to industrial opportunities. For instance, cultural stereotypes dissuade families from supporting women in male-dominated fields like manufacturing (Khosravi, 2018), while laws requiring spousal consent for employment or travel further curtail autonomy (Tohidi, 2019). Even educated women face structural barriers, such as exclusion from technical roles in high-paying industries like oil and gas, despite their growing presence in STEM education (Zahedi et al., 2022). These norms and laws not only perpetuate occupational segregation but also signal systemic devaluation of women's economic contributions. Economic policies, including privatization and sanctions, exacerbate disparities. Privatized industries prioritize cost-cutting, often displacing women workers into informal, low-wage jobs (Salehi-Isfahani, 2020), while international sanctions concentrate growth in male-dominated sectors like energy, sidelining women (Moghadam, 2019). Additionally, subsidy programs and welfare policies that prioritize male breadwinners reinforce traditional gender roles, limiting women's economic agency (Kazemipur, 2022). Such policies entrench gendered labor divisions and hinder women's upward mobility.

The exclusion of women from industrial sectors undermines Iran's economic potential. Gender gaps in labor force participation stifle innovation and GDP growth, as half the population remains underutilized (World Bank, 2020). Socially, barriers push women into informal work, exposing them to exploitation and poverty (Rostami-Povey, 2021), while perpetuating income inequality. Furthermore, Iran's failure to address these issues risks isolating it from global commitments to gender equality, such as the UN Sustainable Development Goals (SDG 5), limiting international collaboration and development opportunities (UNDP, 2021). Addressing these challenges requires holistic reforms. Legal amendments to eliminate discriminatory practices, investments in women's technical training, and policies promoting gender diversity in industrial leadership are critical. Economic strategies must prioritize inclusive growth, such as subsidies targeting women entrepreneurs and sanctions relief to diversify opportunities. By dismantling systemic barriers, Iran can harness women's potential to drive sustainable development and foster a more equitable society.

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